85-2471

45-1

ROUTING AND TRANSMITTAL SLIP

Date: 16 July 1985

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Director of Communications		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

cc: D/Office of Training and Education
C/PMS/OL
D/OIT

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

STAT FROM: ([redacted] EO/DDA 7D18 HQS

Room No.—Bldg.

STAT [redacted]

Phone No.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ GPO : 1983 O - 381-529 (301)

SAIC

Science Applications International Corporation

July 11, 1985

Mr. Harry Fitzwater
Deputy Director for Administration
Room 7D24
Central Intelligence Agency
Washington, D.C. 20505

Dear Harry:

I have been searching for SAIC internal research and development projects which are ready to produce capabilities having applications to Intelligence Community requirements. The attached brochure describes a new product which has been developed at the Company's Electronic Laboratory in Springfield, Virginia. The system might be of interest to the Office of Communications and the Office of Training. I have seen the devise in operation, and the versatility in the basic design was especially impressive. This unique characteristic would make the system useful in the field and in the classroom environment.

Should there be any interest within the DDA, a demonstration could be quickly arranged. My phone number in McLean, VA, is 734-5944.

Best Wishes,

Herb Kline

Herb Kline

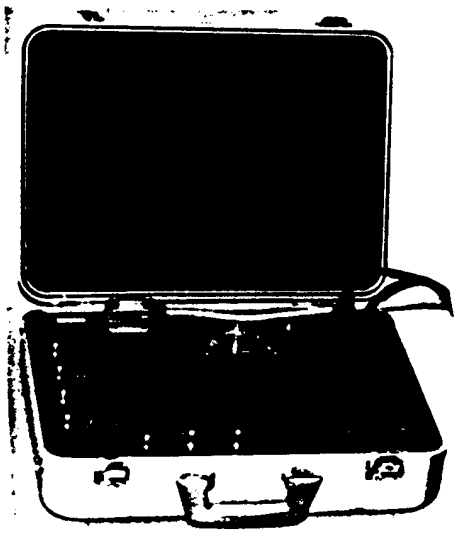
HK/sjk

Attachments: A/S

1710 Goodridge Drive, P.O. Box 1303, McLean, Virginia 22102, (703) 821-4300

Other SAIC Offices: Albuquerque, Atlanta, Boston, Chicago, Colorado Springs, Dayton, Denver, Huntsville, La Jolla, Los Angeles, Oak Ridge, Orlando, Palo Alto, San Diego, Seattle, Tucson, and Washington, D.C.

Sanitized Copy Approved for Release 2010/10/14 : CIA-RDP88G00186R000700850005-1



PROGRAM CONTROLLED
MULTI-CHANNEL
MIXED MODULATION
INDEPENDENT
FREQUENCY AGILE

PERSON-PORTABLE

COM.Gen **Model 395/1A**

COMMUNICATIONS ENVIRONMENT GENERATOR

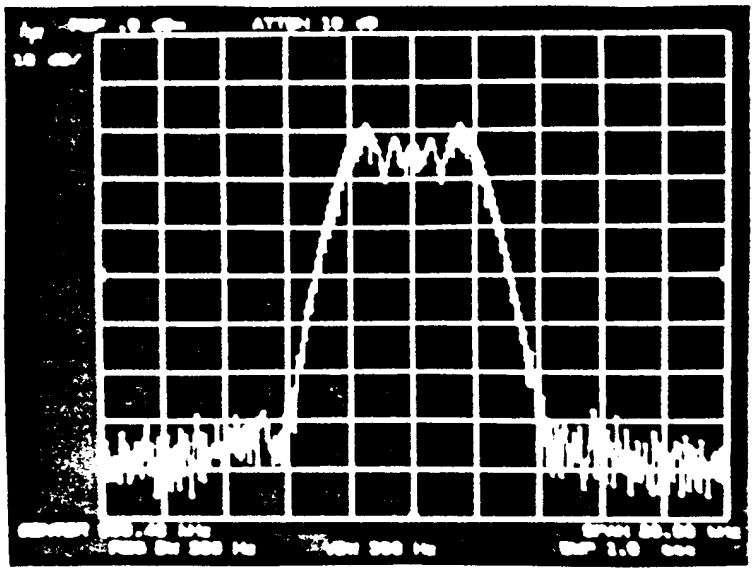
The Model 395/1A COM.Gen is a program controlled, multi-channel, frequency agile signal generator capable of simulating complex communications environments which include modern communications waveforms and procedures.

When coupled with SAIC's GRIDSET, the Model 395/1A COM.Gen becomes a complete test signal generating system that can be fielded in place of a van full of equipment when receiver test and evaluation, communications environment, communications background, jamming and intercept training signals are required. The system's ability to generate independent modulation types on each channel, to frequency hop at rates up to 1 million frequency changes of arbitrary width each second, to simulate voice, data and jamming signals all under program control, make it an unusually valuable tool.

SAIC
Science Applications International Corporation

OVERVIEW

The SAIC Communications Signal Generator is designed to emulate or simulate the common communication signals (Red, Blue, or Gray), modulations and data transmissions associated with the military command and control structure. The nominal specifications for a single channel of a communications system are as follows:



Frequency Modulation -- 300 Hz Sine Wave Source 1.5 KHz Deviation

Modulation Types

- Amplitude Modulation (AM)
- Frequency Modulation (FM)
- Phase Modulation (PM)

Modulation Sources

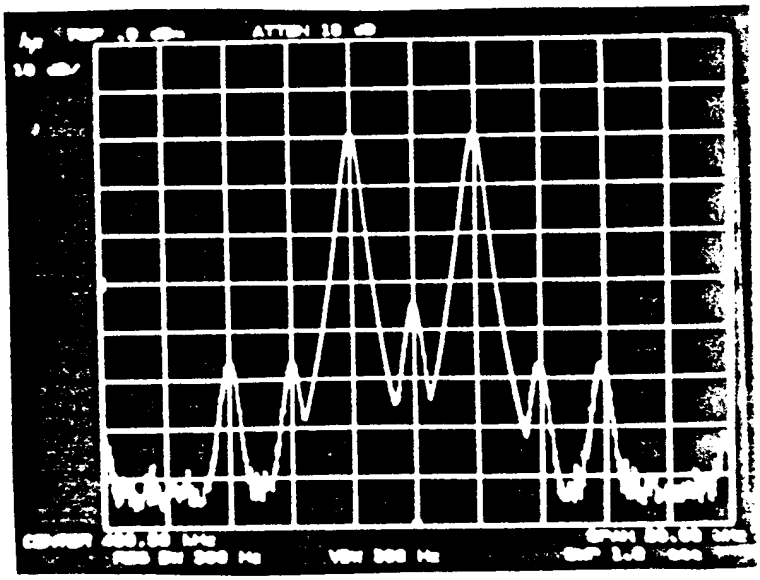
- Internal
- External
- Analog Data
- Digital Data
- Noise

Signal Classifications

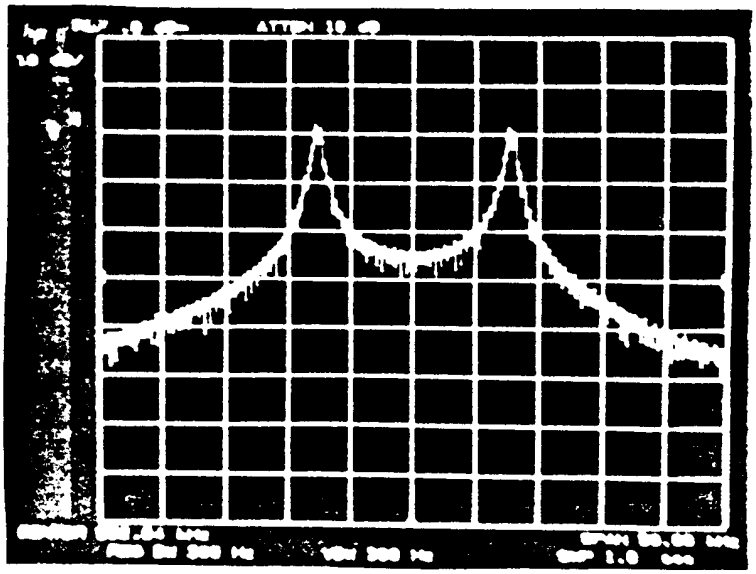
- AM
  - -- Noise Modulation
  - -- Double Side Band
  - -- Double Side Band (Suppressed Carrier)
  - -- On-Off Keyed
- FM
  - -- Wide Band
  - -- Narrow Band
  - -- Analog Modulation
  - -- Digital Modulation (FSK)
  - -- Noise Modulation
- PSK
  - -- BPSK
  - -- QPSK

Selected System Parameters

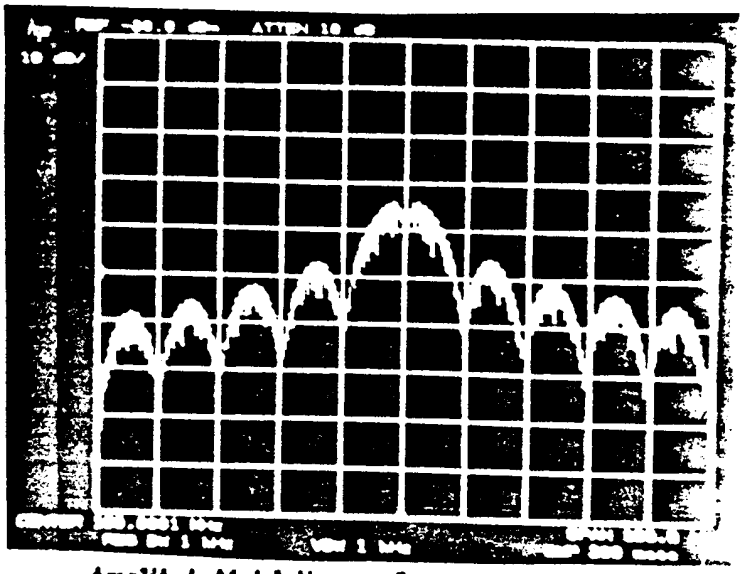
- Baseband Frequency Range
  0 to 5.37 MHz ± .32Hz
- Modulation Rates
  - -- Internal 300 Hz to 10 kHz+
  - -- External 0 Hz to 100 kHz+
  - -- Signal Amplitude
    -40 to 0 dBm
- Modulation Functions (AM and FM)
  - -- Internal - Square, sine, triangle, narrow band-limited noise, wide band noise
  - -- External - Any arbitrary, predefined external signal
- Frequency Hopping
  - -- Rate -- 0 to 1 MHz
  - -- Range -- 0 to 5.37 MHz
  - -- Resolution -- 81.9 Hz



Amplitude Modulation -- Double Sideband, Suppressed Carrier. 2 KHz Sine Wave Modulation



Frequency Modulation -- Square Wave Modulation (FSK)



Amplitude Modulation -- Square Wave Source. PW = 100 Microsec. PRF = 1 KHz

Control Functions

- -- FM Deviation
- -- Modulation Rate
- -- AM Modulation Index
- -- Signal Amplitude
- -- Modulation Source and/or Type
- -- Carrier Frequency
- -- Radio Hop Parameters
- -- Look-through Parameters

Special Features

- Frequency Hopping Signals
- Look-through Capabilities for Jammers
- Multiple Channel Capability
- Arbitrary Phase-shifting
- Special External Signal Sources
- Combinations of the above
- Special Purpose Modulations, e.g., complex pulse signals, stagger, jitter (radar)

Options

- Frequency range upward convertible to arbitrary ranges, depending on internal mixer(s)
- Packaging -- Ruggedized
  - -- Laboratory
  - -- Unattended and/or remote operations
- Operator/Communication/Instrumentation interface using a variety of standard interfaces in a variety of operational environments
- All operational to minimal functional software embedded in on-board